

**FOLDERS WITH ADJUSTABLE
INTERNAL COMPARTMENT AREAS**

Inventors:

Richard BENEROFF
Spring Valley Road
Harding Township, New Jersey 07960

Eric KIM
808 Harmon Cove Towers
Secaucus, New Jersey 07094

Jeffrey A. SMITH
917 Lake Avenue
Clark, New Jersey 07066

Attorneys for Applicants:

Douglas E. Ringel (Reg. No. 34,416)
KENYON & KENYON
One Broadway
New York, New York 10004
tel: (212) 425-7200
fax: (212) 425-5288

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BACKGROUND OF THE INVENTION

The invention relates to packaging in general, and, more particularly, to packaging folders for retaining items in a secure manner.

For shipping or other purposes, securing items in protective packaging is often desirable. Various packaging folders are known for this purpose. For example, folders are used that comprise a series of panels that are folded around an item or items to secure the item or items for shipping. Depending on the design, various of these known folders have certain drawbacks. For example, the folder may be designed only for an object of a particular size, such that a different folder is needed to accommodate other differently sized objects.

OBJECT AND SUMMARY OF THE INVENTION

An object of the invention is to provide alternative folder constructions for securely packaging an item or items.

Another object of the invention is to provide folder constructions that are capable of securely packaging items of different sizes.

Another object of the invention is to provide folder constructions that secure items such that they cannot be accessed without tearing or altering the package in a way that is externally evident.

In accordance with certain embodiments of the invention, a packaging folder is provided comprising a plurality of panels bounding an internal space for accommodating an item or items. The dimensions of the internal space may be varied by selectively leaving in or removing one or more removable plug panels. The

selective leaving in or removing of plug panels provides different internal compartment configurations for securing an item or items.

The packaging folder may comprise a front cover and a back cover, foldable together like a book to surround the internal compartment or compartments. The back cover and front cover may be secured in the folded condition, for example by glue, such that the folder cannot be opened without tearing the folder. A spine of the packaging folder may be provided with a tear tape to facilitate opening of the folder.

BRIEF DESCRIPTION OF THE DRAWINGS

- FIGURE 1 shows a perspective view of a folder in accordance with a first embodiment of the invention;
- FIGURE 2 shows a perspective view of the folder of Figure 1 with an item being placed in it;
- FIGURE 3 shows the folder of Figure 1 in a folded condition;
- FIGURE 4 shows the folder of Figure 1 in a folded condition, with a portion of the tear tape for opening the folder visible;
- FIGURE 5 shows a perspective view of the folder of Figure 1, with two internal plug panels removed and an item being placed in the folder;
- FIGURE 6 shows a perspective view of the folder of Figure 1, with four internal plug panels removed and two items being placed in the folder;
- FIGURE 7 shows a flat layout of a cut blank for forming the folder of Figure 1;
- FIGURE 8 shows a flat layout of a cut blank for forming a folder in accordance with a second embodiment of the invention;

FIGURE 9 shows a flat layout of a cut blank that comprises two cut blanks of the type shown in Figure 8;

FIGURE 10 shows a perspective view of a folder in accordance with a third embodiment of the invention;

5 FIGURE 11 shows a perspective view of the folder of Figure 10, with the two inner leaf panels folded inward;

FIGURE 12 shows a perspective view of the folder of Figure 10, with four internal plug panels removed; and

FIGURE 13 shows a perspective view of the folder of Figure 10, with four internal plug panels removed and two items being placed in the folder.

DETAILED DESCRIPTION OF THE ILLUSTRATED EMBODIMENTS

Figure 1 shows a folder 10 for securely packaging an item or items. A flat layout of a cut blank for forming the folder 10 of Figure 1 is shown in Figure 7. In this embodiment, the material of the folder is corrugated cardboard, although any of a number of other suitable materials may be used.

As shown in Figures 1 and 7, the folder 10 comprises a front cover 14 and a back cover 18, with a spine 16 between them. The front cover 14 is foldable with respect to the spine 16 about fold line 15. The back cover 18 is foldable with respect to the spine 16 about fold line 17.

20 A front inner leaf panel 12 is attached to the front cover 14 and foldable with respect to the front cover 14 about fold line 13. A back inner leaf panel 20 is attached to the back cover 18 and foldable with respect to the back cover about fold line 19.

A score line 21 in the front inner leaf panel 12 defines a product securing area 22. Within the product securing area 22 are located a first plug panel 23, a second plug panel 24, and a recess 25. Both the first plug panel 23 and the second plug panel 24 are attached to the front inner leaf panel 12 at the area of the score line 21, and both the first plug panel 23 and the second plug panel 24 are easily detached from the front inner leaf panel 12 at the score line 21.

Similar to the front inner leaf panel 12, the back inner leaf panel 20 has a score line 31 defining a product securing area 32. A third plug panel 33, a fourth plug panel 34, and a recess 35 are located within the product securing area 32. Both the third plug panel 33 and the fourth plug panel 34 are attached to, but easily detachable from, the back inner leaf panel 20.

To form the folder 10 as shown in Figure 1 from the cut blank shown in Figure 7, the front inner leaf panel 12 is folded inwardly about fold line 13 until it contacts the front cover 14. The front inner leaf panel 12 and the front cover 14 may be adhered together, for example by glue or other adhesive preapplied to one or both of the mating surfaces. In a similar manner, the back inner leaf panel 20 is folded inwardly to contact the back cover 18, and those two may similarly be adhered together.

As shown in Figure 1, the recess 25 in the front inner leaf panel 12 now forms a compartment area 26 that is bounded on one side by the front cover 14. Similarly, the recess 35 in the back inner leaf panel 20 now forms a compartment area 36 that is bounded on one side by the back cover 18.

Figure 2 shows an item 1 being placed in the front compartment area 26. In this case, the item 1 is a compact disk (CD). For accommodating this item 1, the first through fourth plug panels 23, 24, 33, 34 are all left in place, such that the front compartment area 26 together with the back compartment area 36 define an internal space with dimensions approximating those of the item 1.

Once the item 1 is in place, the two halves of the folder 10 are folded together, like closing a book. The fully closed folder 10 is shown in Figure 3. When closed, the folder may be sealed in the closed position by any of a number of suitable means. For example, a cohesive or pressure sensitive glue may be located on the front inner leaf panel 12 and/or the back inner leaf panel 20, such that the two adhere together when the folder is closed.

It will be appreciated that once the folder is sealed closed, the item inside the folder is securely held within it, in a compartment that matches the item's dimensions. The folder can only be opened in a manner that reveals that it has been opened, thereby making the packaging "tamper-evident." To facilitate opening, a strip of tear tape 9 may be located on the inside of the spine 16. Part of the tear tape 9 hangs past the edge of the spine 16 to allow gripping. As shown in Figure 4, pulling on the tear tape 9 separates the spine 16 from the front cover 14 and the back cover 18, thereby allowing the folder to be opened to access the item secured inside.

The folder 10 is versatile in that it can snugly accommodate items of different sizes as well as plural items. This is because each of the plug panels 23, 24, 33, 34 is selectively detachable and removable, such that the compartment area within the folder 10 can be adjusted for each particular application.

Figure 5 shows the folder 10 with plug panels 24 and 34 removed. This changes the size of the compartment to accommodate the item 2, which is a digital video disk (DVD).

Figure 6 shows the folder 10 with all of the plug panels 23, 24, 33, 34 removed. This again changes the size of the compartment, this time to accommodate the two items 3, 4, which are two compact disks (CDs).

The size of the compartment may also be varied in thickness, to accommodate thicker or deeper items. To increase the thickness of the compartment area, the portion of the front cover and/or back cover adjacent to the compartment area may be compressed to be thinner in that area, thereby accommodating thicker or deeper items.

Figure 8 shows a blank for a folder 40 that constitutes an alternative embodiment to the folder 10 shown in Figures 1 through 7. The difference between folder 40 and folder 10 is that folder 40 has four plug panels on each side. Plug panels 51, 52, 53, 54 are attached to the front inner leaf panel 42, and plug panels 61, 62, 63, 64 are attached to the back inner leaf panel 50.

In the folder 40, as in the folder 10, selectively leaving in place or removing the plug panels changes the dimensions of the internal space for accommodating an item or items to be packaged. For example, one compact disk (CD) can be accommodated by removing plug panels 52 and 62. Two compact disks (CDs) can be accommodated by removing plug panels 51, 52, 53, 61, 62 and 63. One digital video disk (DVD) can be accommodated by removing plug panels 51, 52, 61 and 62. Two digital video disks (DVDs) can be accommodated by removing all plug panels 51, 52,

53, 54, 61, 62, 63 and 64. In other respects, the folder 40 operates similarly to the folder 10.

To facilitate manufacturing, a plurality of cut blanks for forming folders in accordance with the invention may be manufactured together out of a single sheet of stock material. Figure 9 shows a single sheet of stock material from which two folders 40 are cut.

A third embodiment of a folder according to the invention is shown in Figures 10 through 13. There, the folder 70 comprises a front inner leaf panel 72, a front cover 74, a spine 76, a back cover 78, and a back inner leaf panel 80. A score line 81 in the front inner leaf panel 72 defines a product securing area 82 having a first plug panel 83, a second plug panel 84, and a third plug panel 85. A score line 91 in the back inner leaf panel 80 defines a product securing area 92 having a fourth plug panel 93, a fifth plug panel 94, and a sixth plug panel 95. In this illustrated embodiment, the plug panels have holes 8 in them to facilitate removal.

Figure 10 shows the front inner leaf panel 72 and the back inner leaf panel 80 being folded inwardly. Figure 11 shows them in their folded condition, where they are attached to the front cover 74 and the back cover 78, respectively.

Figure 12 shows plug panels 83, 85, 93 and 95 being removed. This defines two completely separate compartments for receiving items to be packaged. Of course, as with other embodiments, any combination of plug panels may be left in place or removed, depending on the item or items to be packaged.

Figure 13 shows items 5, 6 being placed in the compartments defined by the removal of the plug panels 83, 85, 93 and 95. In this case, the items shown are boxes

for collectible coins. Once the items are in place, the folder is sealed in a manner similar to the previously described embodiments.

It will be appreciated that various modifications can be made to the above embodiments without departing from the scope of the invention. While the above description provides various alternative constructions, the scope of the invention is defined by the appended claims.

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